

REMARKS

Claims 1-31 are pending in the present application. In the Final Office Action mailed August 17, 2006, the Examiner rejected claims 16-17 and 23-24 under 35 U.S.C. §102(b) as being anticipated by Civil et al. (GR 2,255,645).

Claims 1-15 and 25-31 have been allowed and claims 18-22 were indicated as containing allowable subject matter. Such indication is appreciated.

Applicant has amended claim 1 to correct a typographical error therein.

In the Office Action of August 17, 2006, the Examiner made a number of objections to the specification and drawings. The Examiner objected to the disclosure, stating that “[i]n the specification, it is unclear how the conductive wire spirals (62) in the first column are associated with the conductive wire spirals in the second column.” *Office Action, August 17, 2006, p. 2*. Applicant refers the Examiner to Fig. 6, which shows a flux concentrator 60 including a plurality of conductive wire spirals 62. The conductive wire spirals include two oppositely spiraled conductive paths 64, 66. *Application, ¶55*. In Fig. 6, element 62 generally refers to the plurality of conductive wire spirals shown therein, of which the conductive wire spiral of the first column 64 is a part of, and of which the conductive wire spiral of the second column 66 is a part of. Therefore, Fig. 6, along with the text of the specification, clearly describes the conductive wire spirals 62 objected to by the Examiner.

The Examiner also objected to the disclosure of six rectangular elements connected to the conductive wire spirals 62, stating that “[t]he description of the six rectangular elements are not fully disclosed, therefore their functions are not clear.” *Office Action, supra at 2*. Referring again to Fig. 6, the six rectangular elements identified by the Examiner are shown as part of flux concentrator 60. The six elements are illustrated merely as structural support for the shown flux concentrator 60, and are not of significance to the claimed invention. 37 CFR 1.83(a) only requires claimed elements be shown and described. The six rectangular elements are not claimed in the present application and, as such, it is believed that these elements need not be specifically identified in the specification since they are not of significance to the claimed invention. Applicant believes that one skilled in the art will readily recognize the superfluous nature of these supports and therefore believes that no correction is necessary.

The Examiner also objected to the drawings under 37 CFR 1.83(a), stating that “the features of two hall effect sensors disposed proximate the conductor as recited in claims 2,6,7,8 must be shown.” *Office Action, supra at 2*. Fig. 1 of the application clearly shows a pair of Hall effect sensors H1, H2 disposed on substantially opposite sides of conductor 12 and proximate

thereto. *Application*, ¶34. Similarly, Fig. 2 shows Hall effect sensors H1, H2 positioned proximate to conductor 12 and Fig. 3 shows Hall effect sensors H1, H2 positioned proximate to bus bar conductor 12a. *Application*, ¶¶35-41. Hall effect sensors 46, 48 are also shown in Figs. 4 and 5, in which the Hall effect sensors 46, 48 are positioned proximate to spiraled conductive paths 42, 44. *Application*, ¶¶49-51. As all of these figures show Hall effect sensors proximate to a conductor, Applicant requests withdrawal of the Examiner's objection to the drawings under 37 CFR 1.83(a).

The Examiner also rejected claims 16-17 and 23-24 under 35 U.S.C. §102(b) as being anticipated by Civil et al., stating that "Civil et al. disclose a current sensor as shown in figure 1 having at least one spiraled helix conductive path (8) configured to receive a current flow therethrough and concentrate magnetic flux induced by the current flow through the at least one spiraled helix conductive path (8) and at least one Hall effect sensor (4) positioned proximate to the at least one spiraled helix conductive path (8) configured to sense the magnetic flux and provide a signal indication of the current flow through the spiraled helix conductive path (8)." *Office Action*, *supra* at 4.

In response to Applicant's previous argument regarding the interpretation of the term "helix" in claim 16, the Examiner further explained that "the term 'helix' has several definitions" and that "Examiner considers the definition on the first page, the second definition 'a spiral form or structure' would fit the description of the coil (8) of Civil et al." *Id.* at 5-6. Applicant acknowledges the Examiner's interpretation of "helix", and as such, has elected to amend claim 16 to incorporate the allowable subject matter of claim 18. As indicated by the Examiner, the subject matter of "[c]laim 18 is allowable since the prior art does not disclose at least one spiraled helix conductive (sic) includes a first spiraled conductive path having a first hall effect sensor positioned proximate thereto and a second spiraled conductive path having a second hall effect sensor positioned proximate thereto and in combined (sic) with other claimed elements." *Office Action*, *supra* at 5. As amended, claim 16 calls for, in part, a current sensor having at least one spiraled-helix conductive path configured to receive a current flow therethrough and concentrate magnetic flux induced by the current flow through the at least one spiraled-helix conductive path, wherein the at least one spiraled-helix conductive path includes a first spiraled conductive path having a first Hall effect sensor positioned proximate thereto and a second spiraled conductive path having a second Hall effect sensor positioned proximate thereto. In light of this amendment, Applicant believes that claim 16, and the claims dependent therefrom, are in condition for allowance.

Applicant appreciates the Examiner's consideration of the above amendment, and in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-31.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,

/Kevin R. Rosin/

Kevin R. Rosin
Registration No. 55,584
Phone 262-376-5170 ext. 15
krr@zpspatents.com

Dated: October 17, 2006
Attorney Docket No.: ETC7455.065

P.O. ADDRESS:
Ziolkowski Patent Solutions Group, SC
14135 North Cedarburg Road
Mequon, WI 53097-1416
262-376-5170